manner. Among solvent fractions of S. lindbergii, the methylene chloride fraction was found to be the most toxic among all. Doses inducing %50 cell growth inhibition (IC_{50}) for CH_2CL_2 and EtOAc fractions against HL60 were 53.96, 528.8 µg/ml. The measured doses against K562 were 94.39 , 1093 µg/ml respectively. *S. leuto-crolla* induced a sub-G1 peak in flow cytometry histogram of treated cells compared, when compared to the control group, indicating apoptotic cell death involvement in S. lindbergii- induced toxicity.
Conclusion: In this study, the cytotoxic and proapoptotic effects of *S. leuto-crolla* on leukemia cancer cell lines were investigated. Our data confirmed that fractions extract of *S. leuto-crolla* has cytotoxic activity against HL60 and K562 cell lines, which is consistent with previous studies conducted on other species of *Scutellaria* genus. Different studies have shown the antiproliferative activity of *Scutellaria* species including *S. baicalensis* and *S. barbata*.

Keywords: Scutellaria Leuto-*C*rolla, Cytotoxicity, Apoptosis

174 Malathion-Induced Impairment of Glucose-Stimulated Insulin Secretion Via Stress Oxidative Process in Isolated Rat Pancreatic Islets: In Vivo And in Vitro Studies

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Objective: Malathion is one of the most commonly used organophosphate insecticides (OPs) of the world responsible for impairment of glucose homeostasis. The aim of this survey was to investigate the relationship between acute exposure to Malathion with oxidative stress elements and functions of pancreatic islets in vitro and in vivo.
Methods: Pilot study showed that oral administration of Malathion (400 mg/kg) impairs glucose homeostasis after 24 h in wistar rats. Therefore, after 24 h of oral Malathion exposure (400 mg/kg), function of pancreas in response to changes in serum glucose (after oral administration of 2 g/kg glucose) were evaluated using glucose oxidase kit in a time-course fashion (0, 30, 60, 120 and 180 min). The response of the isolated islets to gradient glucose concentrations (2.8, 8.3, 16.7 and 22 mM) was also assessed using insulin ELAISA kit. In addition, the level of cellular lipid peroxidation (fluorometeric method), protein (spectrophotometric method) and DNA damage were tested using 8-hydroxyguanosine ELASA kit.
Results: according to time-course study and calculation of insulin/glucose AUC, Malathion decreased insulin response to serum glucose changes in vivo. Static experiments in vitro indicated an impairment of islets insulin secretion in response to glucose concentration gradient. Malathion increased lipid peroxidation and induced protein and DNA damage as confirmed by increase in islets lipid peroxides, carbonyl groups, and 8-hydroxyguanosine.
Conclusion: There is a correlation between rat pancreas and isolated islets response to glucose concentration changes and cellular oxidative stress following acute in vivo and in vitro Malathion exposure.

Keywords: Malathion, islet isolation, oxidative stress, insulin secretion

175 Studying the Poisoning Level of Poisonous Animal (Snake and Scorpion) in Lenjan City in 2010

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